

**MINERAL INVESTMENT STIMULATION PROGRAM
OF THE
CANADA - NEW BRUNSWICK MINERAL DEVELOPMENT AGREEMENT**

by
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New Brunswick
Mineral
Development
Agreement

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L'Exploitation
Minérale



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Minister of State for Mines

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CANADA - NEW BRUNSWICK MINERAL DEVELOPMENT AGREEMENT

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Abstract

The Mineral Investment Stimulation Program (MISP) was commissioned under the Canada/New Brunswick Mineral Development Agreement as a private sector assistance initiative designed to encourage development within the provincial minerals industry. Total program budget was set at \$1,000,000, and the amount actually available for project funding was in the order of \$800,000, after discounting for administration costs. Assistance was provided on a project by project basis, with maximum MISP contribution per project not exceeding 50% of total project expenditures, to a maximum of \$50,000.

A total of seventeen companies applied for assistance. Of these, nine were given approval to carry out twenty-three separate projects between them, covering mostly metallurgical and geological initiatives. Several mineral commodities were the focus of these projects, including gold, manganese, antimony, tin, oil shale, gypsum, limestone and base metals (eg. copper, lead, and zinc). The participating companies included Dominion Explorers Inc, Brunswick Mining and Smelting, Maritime Resource Research Ltd., Mispec Resources Inc, Canadian Occidental Petroleum Ltd., Eastern Gypsum, Dickenson Mining Ltd., LAC Minerals Inc., and Corona Corporation. Overall MISP project expenditures were approximately \$772,000 which in turn stimulated total project expenditures of nearly 2.04 million dollars. The company that benefited the most from the program was Dominion Explorers Inc. having received approximately \$195,000 or 20% of the total program budget.

It was shown that the MISP has provided a stimulus for increased development activity in New Brunswick and has supported the furthering of many mineral properties and/or operations. The mineral industry was very receptive to the program and has expressed a sincere interest in having the program or something similar continued or initiated under MDA II. Under a future program, it is recommended that its scope be expanded to include projects addressing environmental and mining concerns.

Résumé

Le Programme de stimulation de l'investissement dans le secteur minéral (PSISM) a été créé en vertu de l'Entente Canada-Nouveau-Brunswick concernant l'exploitation minière en tant qu'initiative d'aide au secteur privé visant à encourager le développement de l'industrie minière provinciale. Le budget total du projet a été établi à 1 000 000 \$ et le montant réel alloué au financement des projets était de l'ordre de 800 000 \$, une fois soustraits les frais d'administration. L'aide était fournie dans le cadre de projets et la contribution du PSISM ne devait pas dépasser cinquante pour cent du coût total de chaque projet, jusqu'à concurrence de 50 000 \$.

Au total, dix-sept entreprises ont fait une demande d'aide. De celles-ci, neuf entreprises ont reçu l'autorisation d'entreprendre en tout vingt-trois projets distincts, projets pour la plupart de nature métallurgique ou géologique. Un grand nombre de ressources minérales étaient au centre de ces projets, entre autres, l'or, le manganèse, l'antimoine, l'étain, le pétrole de schistes bitumineux, le gypse, le calcaire et les métaux de base (cuivre, plomb et zinc). Les neuf entreprises participantes étaient Dominion Explorers Inc., Brunswick Mining and Smelting, Maritime Resource Research Ltd., Mispic Resources Inc., Canadian Occidental Petroleum Ltd., Eastern Gypsum, Dickenson Mining Ltd., LAC Minerals Inc. et Corona Corporation. Les dépenses totales du PSISM ont été de l'ordre d'environ 772 000 \$, ce qui a, en retour, entraîné des dépenses totales de projets de près de 2 040 000 \$. La Dominion Explorers Inc. est l'entreprise qui a le plus bénéficié du programme, puisqu'elle a reçu approximativement 195 000 \$, c'est-à-dire environ 20% du budget total du programme.

Il est prouvé que le PSISM a servi de catalyseur aux activités de développement minier au Nouveau-Brunswick et a permis de faire avancer le développement de bon nombre de propriétés et/ou d'exploitations minières. L'industrie s'est montrée très réceptive vis-à-vis du programme et a laissé savoir qu'elle serait intéressée à ce que ce programme ou une initiative similaire soit inclus dans la deuxième EEM. On recommande, qu'à l'avenir, la portée d'un tel programme soit élargie afin d'inclure des projets ayant trait aux questions minières et environnementales.

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1.0 INTRODUCTION

The Mineral Investment Stimulation Program (MISP) began in July, 1986 as a grant program under the Canada-New Brunswick Mineral Development Agreement (MDA). It was federally funded and provincially administered by the Department of Natural Resources and Energy, with a total program budget of one million dollars.

Under the mandate of the Canada-New Brunswick Economic and Regional Development Agreement (ERDA), the MDA was signed on June 25, 1984 with the global objective to strengthen and diversify the minerals sector of the Provincial economy. The MDA was cost shared between the Federal Government and the Province of New Brunswick, each contributing 15 and 7.307 million dollars, respectively, and has a total commitment of 22.307 million dollars over a five-year term (from June, 1984 to March, 1989).

The MDA projects and programs were grouped under the four broad activities shown in Table 1. Funding arrangements were such that these activities were administered on a dual-delivery basis by the two governments. The agencies that were responsible for the MDA were the Department of Natural Resources and Energy (DNRE) and Energy, Mines and Resources (EMR) for the Province and Federal Government, respectively.

Table 1

MDA Funding Breakdown			
Activity	Federal Share	Provincial Share	Total
	(\$000)		
I. Geoscience	8,500	3,894.3	12,394.3
II. Mining & Minerals Technology	3,400	275	3,675
III. Economic Development	1,600	2,642	4,242
<i>B. Mineral Investment Stimulation Program</i>	<i>1,000</i>	<i>0</i>	<i>1,000</i>
IV. Public Awareness	1,500	495.7	1,995.7
	15,000	7,307	22,307

Forming sector B of Activity III (Economic Development) is the Mineral Investment Stimulation Program (listed as Firm-Specific Assistance in the MDA contract). The aim of the MISP was to promote development of the Province's mineral resources by providing financial assistance to industry on a project by project basis. This was consistent with the overall mandate of the Agreement as well as that set for Economic Development. The latter was geared to identifying opportunities within the mineral industry, and providing a mechanism to address such opportunities.

This report will serve as a review of the private sector projects sponsored by the Mineral Investment Stimulation Program together with the appropriate scheduling, financial and evaluation aspects. Where possible, the project results will be discussed in the context of their actual or potential benefits to the respective companies or mineral operations.

2.0 SELECTION CRITERIA AND APPROVAL PROCESS

The eligibility requirements for a given project are set out in the MISP brochure (Appendix A). Program conditions are such that the applicants must be developers or operators having mineral rights within the Province and that Provincial project funding shall not exceed 50% of an approved project, to a maximum of \$50,000 per project.

Since the aim of the program was to encourage development of existing or known mineral resources having potential, only mineral-related projects consistent with this aim were to be considered for funding. Although exploration (drilling) in the development sense was eligible in certain cases, basic grass-roots exploration having the objective of discovering new mineral resources or deposits was not. Again, this was a consequence of the development theme of the program.

Project types that were deemed eligible fall under five primary groupings:

1. Geological investigations of established mineral deposits

2. Mineral processing studies
3. Market studies
4. Market promotion
5. Productivity audits or assessments

Further details regarding any or all of these areas are provided in Appendix A (MISP brochure). In keeping with the development thrust or theme, a key element in terms of eligibility under the noted areas given above is the resource potential. The guidelines address this aspect by requiring that projects be directed towards "an established mineral deposit" to be eligible for assistance. For the purposes of MISP, the term "an established mineral deposit" is defined as a body of mineral material or concentration of mineral(s) that:

1. is presently in production, or
2. ceased production as a result of geological conditions or market factors during the past ten years, or
3. is professionally evaluated by the Mines Division of the Department of Natural Resources and Energy as having production potential.

The first two definitions are quite definitive whereas the third is more subjective based on the professional opinion or estimation of the noted department. Applications requiring such an opinion as a basis of eligibility were referred to the Department's Geological Surveys Branch for their assessment and input.

Applications or projects that were deemed eligible for MISP assistance were then evaluated according to established criteria to determine the potential benefits of sponsoring such work. These criteria focus primarily on three aspects:

1. Economic feasibility and benefits
2. Technical soundness
3. Project scheduling

The MISP brochure outlines further details on these criteria.

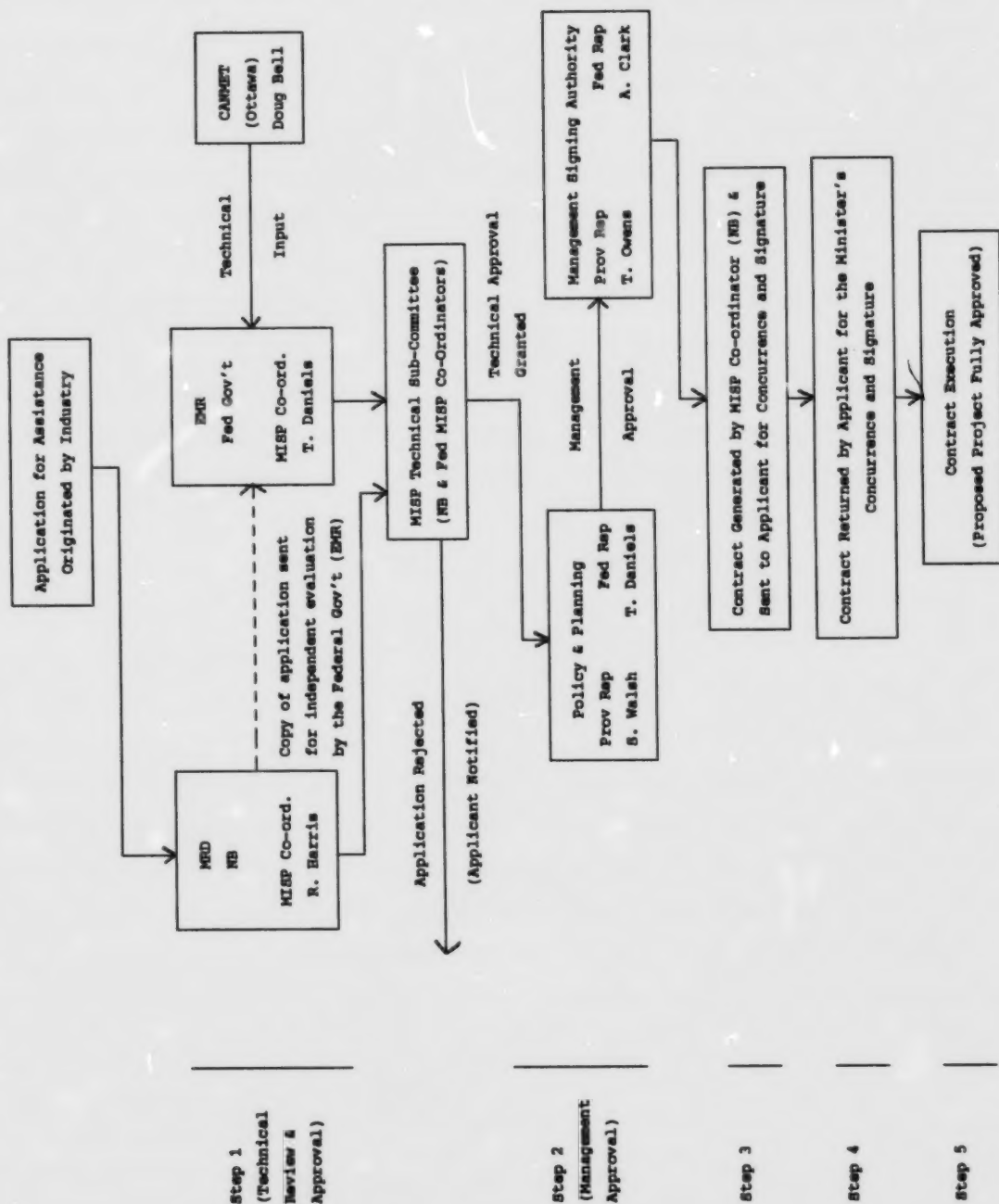
As for the particular review process adopted, a point scoring system was set up which offered an objective way of reviewing applications so as to ensure consistency and fairness throughout the assessment process. Details of the methodology comprising this system are discussed in depth in Appendix B.

There were, however, limitations in the application of this review process. It was not developed to address geological investigations (i.e., drilling) as it was oriented more towards activities relating to process development, marketing, etc. The reason for this was because it was envisaged at the outset that the MISP would not support such investigations. It was not until later on that clarification of the scope of the program was given, confirming the eligibility of such geological work.

Considering the nature of most geological projects, specialist input from the Geological Surveys Branch was necessary on which to base a decision. Therefore, it was felt that these would be handled better on a case by case basis in cooperation with the noted Provincial Branch and the Geological Surveys of Canada (GSC), as an alternative to modifying the scoring system.

Figure 1 is a flowsheet that depicts the routing procedure that is associated with the review and approval of applications submitted for funding. It can be seen from the figure that this is a fairly intricate five-step process, which required input and approval from persons at various technical and management levels in both DNRE and EMR. The average turn around time for evaluating projects and arriving at a decision, (Steps 1 & 2) was between 3-4 weeks from the time the applications were received by the Department of Natural Resources and Energy.

Figure 1: The process associated with the review and approval of MISP applications



For each approved project, a contract was drawn up by DNRE and executed between the company and DNRE covering the terms and conditions of the MISP assistance package. A standard form contract was used for this purpose (Appendix C).

3.0 PROGRAM PROMOTION

First attempts at promoting the program came shortly after its inception in the form of MISP brochures (Appendix A) sent to any and all companies and individuals having mineral-related interests in the Province. This approach was not all that successful until it was coupled with on-site follow-up visits. It was quickly learned that direct discussions with companies were the best way to inform them of the details and benefits of the program and to gain their confidence and support for this development initiative.

Other promotional avenues included newspaper advertisements and the Department's Open House presentations. As well, the program was listed in registries such as the CRPC (Canadian Research and Publication Centre), FBDB (Federal Business Development Bank), Saint John Fundy Regional Development Commission, and others. Appendix D is a copy of an advertisement that was carried by the Northern Miner in 1987.

4.0 CASH FLOW AND PROJECT SCHEDULE

4.1 Cash Flow

Table 2 summarizes the expenditures over the four year period (1986 - 1990) that the program has been in existence. The original program budget was set at \$1,000,000, and the actual funding that was available to the program was \$985,000. The difference of \$15,000 was "lost" as a consequence of lapsing funds primarily in Fiscal Year 1986/87. Actual expenditures total \$974,814, including both project and administration costs. Average MISP expenditures per project were \$34,000.

Table 2
Cash Flow: Mineral Investment Stimulation Program

<u>Activity</u>	<u>FY 86/87</u>	<u>FY 87/88</u>	<u>FY 88/89</u>	<u>FY 89/90</u>	<u>Total Expenditures</u>
ADMINISTRATION	32,000	50,924	67,600	52,000 e	203,323e
MISP PROJECTS:					
1. Antimony Float Study	12,743	0	0	0	12,743
2. Antimony Smelting	5,450	0	0	0	5,450
3. Mineral Liberation	15,000	0	35,000	0	50,000
4. Metal Distribution	9,000	21,000	0	0	30,000
5. Pyrite Flotation	5,055	11,795	0	0	16,850
6. Pressure Filtration	6,217	12,961	0	0	19,178
7. Skim Air Flotation	4,980	11,620	0	0	16,600
8. Zinc Cleaning	0	10,200	20,594	0	30,794
9. Plymouth Mn Deposit	0	50,000	0	0	50,000
10. Cape Spencer Gold Deposit	0	50,000	0	0	50,000
11. Lake George Gold	0	50,000	0	0	50,000
12. Lake George Antimony - Phase 1	0	50,000	0	0	50,000
13. Lake George Antimony - Phase 2	0	50,000	0	0	50,000
14. Survey of NB Gypsum	0	30,000	13,877	0	33,877
15. Quebec Sturgeon Gold Deposit	0	15,000	35,000	0	50,000
16. Elmtree Gold Deposit	0	15,000	35,000	0	50,000
17. Albert County Oil Shale	0	3,643	6,856	0	10,499
18. Mt. Pleasant Tin - Phase 1	0	0	50,000	0	50,000
19. Mt. Pleasant Tin - Phase 2	0	0	50,000	0	50,000
20. Lake George Core Analysis	0	0	6,000	0	6,000
21. Havelock Limestone	0	0	50,000	0	50,000
22. Cape Spencer Gold - Phase 2	0	0	35,000	0	35,000
23. Lake George Mine Improvements	0	0	0	4,500	4,500
Project Sub Total	58,445	381,219	327,327	4,500	771,491
Grand Total -(Includes Admin.)	91,244	432,161	394,927	56,500	974,814

e - estimated

The most significant payouts occurred in the second and third fiscal years (87/88 and 88/89), accounting for \$432,200 and \$394,900, respectively or a total of 83% of the program budget. Modest expenditures in the first year (FY - 86/87) were attributed to program startup and to the time required for initial program promotion. The fourth or final year (FY - 89/90) was a wrap up of the program and accounted for a payout of \$56,500.

4.2 Project Schedule and Report Confidentiality

The project schedules are detailed in Figure 2. As reflected by the expenditure figures, the majority of project activity occurred in Fiscal Years 87/88 and 88/89. The average project period was determined to be nine months. This was based on the actual time for project completion, as many of the projects required extensions over and above that specified by their respective contracts. Such extensions are also highlighted in the figure.

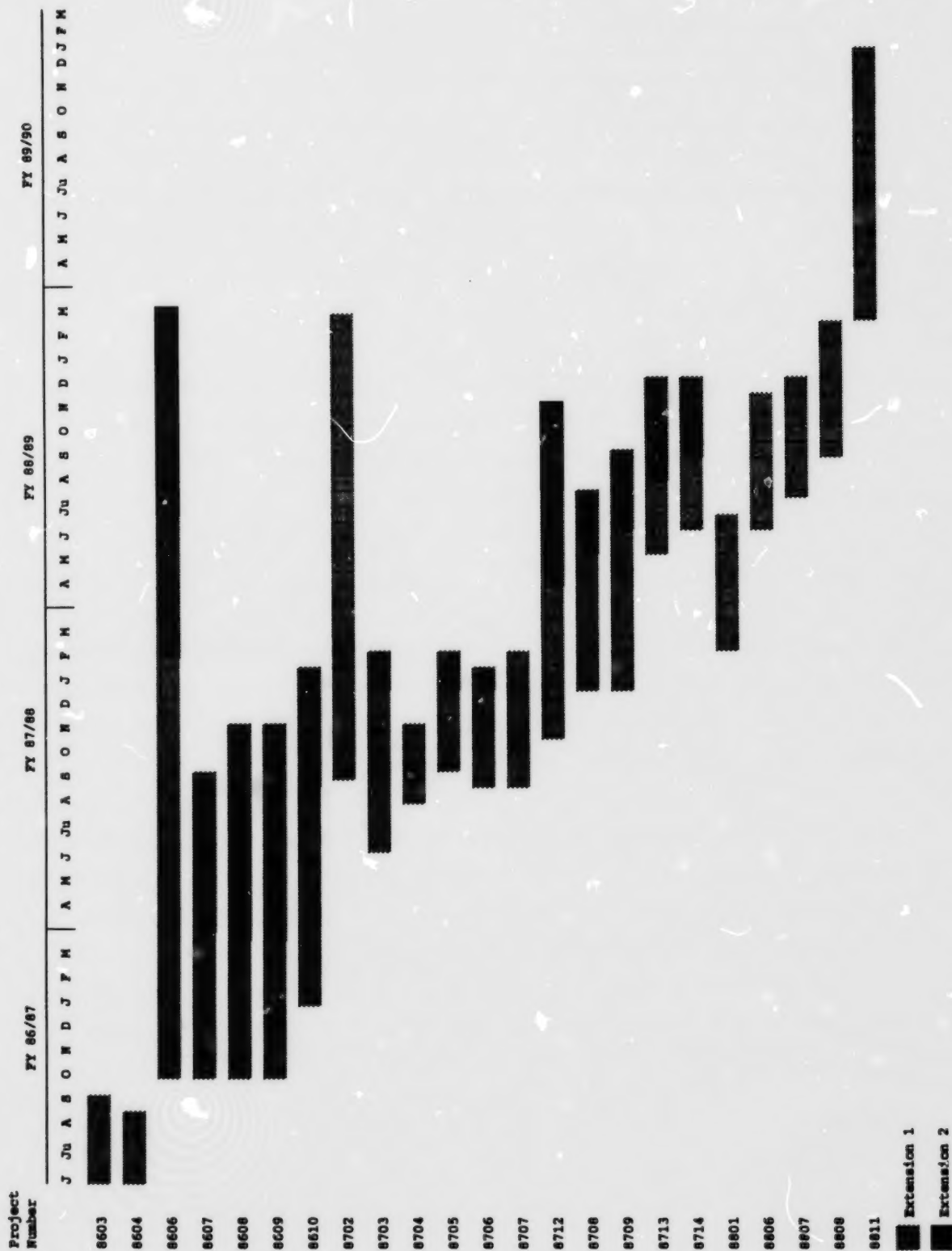
Provisions of the program allowed for final project report submissions to be kept confidential by the government for a period not less than two years from the date of submission. This provided further incentive to industry to participate in the program without the fear of having their results made public before they had the opportunity to benefit from such work. However, after a period of two years from the date of submission, the reports would be made available to the public through the provincial open filing system. Section 8 is a listing of final report submissions including the document release dates on which the reports are to be made public.

5.0 PROJECT REVIEW

Twenty-three projects were approved for funding under the Mineral Investment Stimulation Program, and were the responsibility of nine companies involved with mineral-related activity within the province:

- (1) Dominion Explorers Inc.
- (2) Brunswick Mining and Smelting
- (3) Maritime Resource Research Ltd.

Figure 2
Project Schedule: Mineral Investment Stimulation Program



- (4) Mispac Resources Ltd.
- (5) Dickenson Mining Ltd.
- (6) Canadian Accidental Petroleum Ltd.
- (7) Corona Corporation
- (8) Eastern Gypsum Ltd.
- (9) Lac Minerals Ltd.

Each project will be discussed in the context of financial commitment, project objectives and results and the benefits of the work to the company and, where possible, to the mineral industry in general. The information will be reported in this section under individual company headings.

All final project reports are referenced in Section 8 according to project number and either have been or will be released as open file documents under the provincial information system, subject to the provisions noted in Section 4.0. Relevant project locations within the province are shown in Figure 3.

5.1 Dominion Explorers Inc.

This company owns and operates a 750 tonne/day mining and milling operation in the Lake George area for the recovery of antimony in the form of a stibnite or antimony sulphide concentrate. It is the largest antimony mine in North America and is Canada's only primary antimony producer.

Approval was given to the company to carry out eight separate projects. The nature of these projects ranged from processing initiatives to resource evaluation to mine survey improvements. Total MISP assistance was \$194,693 or approximately 20% of the program budget and accounted for 38% of the total project expenditures. This stimulated expenditures on behalf of the company in the order of \$319,508 resulting in overall project expenditures exceeding \$500,000.



FIGURE 3: LOCATION OF APPROVED NEW BRUNSWICK PROJECTS UNDER THE MINERAL INVESTMENT STIMULATION PROGRAM

MISP Project 8603-21G14

Title: "Antimony Flotation"

MISP Contribution: \$12,743

Total Project Expenditures: \$25,486

Sub-contractor: Lakefield Research Ltd.

Objective: To investigate the flotation behaviour of antimony minerals in an effort to improve on recovery.

Scope: Entailed bench-scale flotation tests under varying reagent concentration and type, size analysis on the feed and product streams to determine metal distribution, and microscopic work to evaluate the characteristics of floatable and non-floatable antimony-bearing minerals.

Results: Lakefield research Ltd., a reputable testing facility located in Ontario, was contracted by Dominion to carry out the study and to prepare the final report. It was concluded that a major loss of antimony was due to fine antimony occlusions in the gangue and that if this antimony fraction were liberated, it would be difficult to recover. The reagent survey did identify a reagent combination that may be effective in recovering the non-sulphide antimony.

Benefit: Provided an understanding of the limitations in processing the antimony ore and has given some direction on how recovery of the concentrator may be improved. Higher antimony recoveries would reflect more saleable product for a given feed tonnage.

MISP Project 8604-21G14

Title: "Bench-scale Antimony Smelting Trials"

MISP Contribution: \$5,450

Total Project Expenditures: \$10,900

Sub-contractor: CANMET

Objective: To investigate the smelting of antimony sulphide concentrate to metal.

Scope: Bench-scale smelting tests were carried out at various temperatures and using different reductants, in effort to determine the best conditions for producing metal. The tests were done in batches using a muffled furnace.

Results: Test work was carried out under contract by CANMET (Canada Centre for Mineral and Energy Technology) of Ottawa, who was also responsible for final report preparation. Smelting tests to produce antimony metal were completed using charcoal and iron as reductants, at a temperature between 750 and 800° C for iron and 800 and 850° C for charcoal. Maximum recoveries of antimony metal from concentrate of 57% and 84% were obtained using charcoal and iron, respectively. The conclusion was that recoveries shown by these tests were not that encouraging and that further work would be required to assess other process conditions.

Benefit: This work has laid the ground work for any future studies the company may choose to do along these lines. As well, another company by the name of APOCAN Ltd. is gearing up to manufacture crude antimony oxide at the SRL (Sulphation Roast Leach) plant in Chatham. They are initially planning to use Chinese metal as feed stock, although future plans may include the processing of concentrates like those produced by Dominion. The work completed under this study could very well provide a basis for further development in support of such plans.

MISP Project 8610-21G14

Title: "Antimony Flash Flotation"

MISP Contribution: \$16,600

Total Project Expenditures: \$36,678

Sub-contractor: Research and Productivity Council (RPC)

Objective: To assess the effectiveness of flash flotation in the recovery of antimony, and on the reduction of both slime loss and dewatering requirements.

Scope: Activities included the installation, commissioning, and operation of an Outo Kumpu SK15 Skim Air Flotation cell in the mill circuit at Lake George. Funding was provided for the purchase of the flotation cell under the Industrial, Innovation and Technology Development Sub-Agreement. Assessment of its performance covered a mass balance and a mineralogical examination of the process streams around the cell as well as an overall mass balance of the concentrator.

Results: It was concluded that the application of a flash flotation cell of the size indicated in the mill circuit had essentially a neutral effect on the overall recovery performance of the concentrator. There was a couple of reasons why this was the case. Firstly, the capacity of the cell was not sized properly resulting in only a fraction of the process material (approx. 33%) being fed to the cell. The remainder was by-passed. This resulted in having a concentrate tonnage from the flash cell that was negligible relative to that produced by the main flotation circuit. Finally, the mineralogy indicated that a significant fraction of the antimony was very fine grained and that any recovery improvements would likely be a function of liberation.

Benefit: Identified some opportunities and constraints in the application of this unit operation and should provide a good basis for any future work.

MISP Project 8705-21G14

Title: "Gold Assessment at Lake George

MISP Contribution: \$50,000

Total Project Expenditures: \$111,259

Sub-contractor: In-house project

Objective: To investigate the potential of a gold showing at the 850 ft. level of the existing mine infrastructure.

Scope: Included 500 feet of drifting with sampling at various intervals to determine the width and length of auriferous sulphides in the fractured zones separate and north of the main antimony vein at the 850 ft. level.

Results: The gold bearing structure in the hanging wall at the 850 ft. level has been opened up along strike by 130 feet. Cross cutting was also done to evaluate the presence of cross structures. Sampling has confirmed the presence of gold in an altered, hydro breccia pipe formation at an average gold grade of 0.086 oz/t (2.6 gms/t) over a continuous length of 85 ft. at an average width of 9.7 ft.

Benefit: Provided a better understanding of this gold occurrence which has encouraged the company to undertake further work to better evaluate its gold tenor and to determine its continuity above and below this zone.

MISP Project 8706-21G14

Title: "Reserves Extension of Antimony - Part 1"

MISP Contribution: \$50,000

Total Project Expenditures: \$139,659

Sub-contractor: Long Year Drilling Ltd.

Objective: To explore for additional antimony reserves in areas south of the main east-west producing vein.

Scope: Approximately 6,800 ft. of diamond core drilling was completed totalling 14 holes along three parallel sections. The resulting core samples were assayed for antimony and gold. Drill holes were spotted in areas thought to be geologically favourable to host quartz-stibnite veins.

Results: Some very interesting antimony and gold values were discovered in an area (1/4 mile square) south of the main ore body. Better values were observed with the deeper drilling which might suggest a trend indicating improvements in grade with depth.

Benefit: The antimony alteration zones encountered are similar and parallel to the "Hibbard" vein that has yielded over 50 million pounds of antimony to date. Therefore, this investigation has provided some encouragement in locating more mineable tonnage in this area. As well, the encouraging gold values have provided an added incentive to better explore this area.

MISP Project 8707-21G14

Title: "Reserves Extension of Antimony - Part 2"

MISP Contribution: \$50,000

Total Project Expenditures: \$152,925

Sub-contractor: Long Year Drilling Ltd.

Objective: To explore for additional Antimony reserves in areas west of the producing ore body.

Scope: Attention was focused on the general area surrounding the Laurence vein, which was discovered back in the 1920's approximately 4000' west of the current mine workings. Approximately 7,500 feet of diamond core drilling was carried out over twelve holes. Selected core samples were assayed for antimony and gold.

Results: Of the twelve holes drilled, two returned ore grades of 4.62% Sb and 3.76% Sb over 6.7' and 7.0' sections, respectively. This host structure was previously unknown. Seven other sections returned antimony in the order of 1% and twenty intersections returned gold values in the range of 0.03 oz/T. Although the antimony and gold structures are not fully understood, an east-west strike direction with a northerly dip seems to be favoured.

Benefit: It was shown that Laurence shaft and surrounding area seems favourable to host structures containing quartz-stibnite veins, and structures favourable for gold and antimony. The company has recommended further testing of these structures and believes this area could possibly extend antimony reserves as well as host significant mineralization of gold.

MISP Project 8806-21G14

Title: "Testing of Drill Core at Lake George"

MISP Contribution: \$6,000

Total Project Expenditures: \$12,827

Sub-contractor: In-house project

Objective: To evaluate the gold tenor of the tested areas at Lake George by resampling and analysing existing core samples.

Scope: Approximately 300,000 feet of drill core stored at the mine site was visually checked, with emphasis on finding gold bearing horizons. This was done with reference to the zone discovered in the hanging wall at the 850 ft. level of the mine infrastructure (see MISP Project 8705-21G14). Grey-green alteration zones with sulphides were noted, and those over one foot in length were sampled and assayed for gold. The assay data was compiled and used in conjunction with previous information in an attempt to correlate the occurrence of gold on the Lake George property.

- Results:** There seems to be a correlation between gold mineralization and granite intrusives, but many values were scattered with little or no obvious correlation. It is thought that some of the values/zones may be en echelon to the main antimony ore body/vein.
- Benefit:** This work will undoubtedly guide further exploration for gold on the Lake George property and has complemented the work conducted under MISP Projects 8705, 8706, and 8708-21G14.

MISP Project 8811-21G14

Title: "Mine Survey Equipment Improvements"

MISP Contribution: \$4,500

Total Project Expenditures: \$34,967

Sub-contractor: In-house project

Objective: To assess commercially available survey instruments as a basis for upgrading their current system.

Scope: Discussions were held with other New Brunswick mining companies (eg. Denison Potican and Brunswick Mining and Smelting) concerning their survey equipment and methods. Input from various suppliers was also obtained. As a result, three equipment models were trial tested at the mine site: Topcon DT-10, Pentax TH-110D and Sokkisha DT-5. An Acer 386 computer coupled with a Hewlett Packard plotter was also tested for computational purposes.

Results: The Sokkisha DT-5 model proved to be the better instrument for this application. Improvements in surveying productivity were determined to be as high as 28%. Time required for data calculation and survey map generation using the computer/plotter combination was reduced by 37%. Bonus calculation time was also reduced by 50%.

Benefit: An up graded surveying package was identified giving greater flexibility and improved productivity. The Sokkisha model coupled with the computer/plotter system was recommended for application.

5.2 Brunswick Mining and Smelting

Brunswick Mining and Smelting is a subsidiary of the Canadian based Noranda Group and operates the largest mining and milling facility in the province. The company mines from one of the largest massive base-metal sulphide deposits in the world, located in an area known as the Bathurst Camp in Northern New Brunswick. The mine feeds a 10,000 tonnes/day concentrator for the recovery of copper, lead, zinc, and other metals. Lead concentrates produced at the mine are shipped to an in-province

smelter owned by Brunswick Mining and Smelting at Belledune for lead metal production. Other concentrates such as copper and zinc are shipped out of province for further processing.

Five projects totalling \$146,822 of MISP assistance were approved by Management Committee for execution by the company. This accounted for approximately 14% and 41% of the total MISP budget and project expenditures respectively, and resulted in a total project payout of \$358,839. All of the projects dealt with processing initiatives designed to either improve ore beneficiation or recover other mineral products.

MISP Project 8607-21P5

Title: "Metal Distribution Assessment"

MISP Contribution: \$30,000

Total Project Expenditures: \$76,380

Sub-contractor: Research and Productivity Council (RPC)

Objective: To determine the distribution of metals and trace elements within the concentrator.

Scope: Required the collection and size and chemical analysis of various samples taken from the grinding, classification and flotation circuits. Complete mass and elemental balances were done using CANMET'S Matbal program based on assay data of samples resulting from the sampling campaign. Elements included in the balance were Pb, Zn, Cu, Ag, Fe, As, Sb, Bi, In, and S, and assays were completed for each of the sixty sampling points.

Results: Balance showed elemental distributions within the circuit and identified the streams which may be of concern. This information was used in the detailed mineralogical assessment completed under MISP Project 8606-21P5.

Benefit: Provided a basis for the mineralogical work previously referenced, wherein various opportunities were identified for possible improvements of the concentrator.

MISP Project 8608-21P5

Title: "Mineral Liberation Assessment"

MISP Contribution: \$50,000

Total Project Expenditures: \$115,109

Sub-contractor: Research and Productivity Council (RPC)

Objective: To conduct a mineralogical survey of the concentrator in effort to identify recovery improvement options.

- Scope:** This project is related to MISP Project 8607-21P5. It was designed to determine the liberation and distributions of minerals in selected process streams. The samples obtained from the previous project were prepared for mineralogical evaluation. An image analyser interfaced with an electron microprobe was programmed to measure particle size, liberation and relevant mineral associations. A material balance program was used to compute a mineralogical balance of the concentrator circuit.
- Results:** Distributions of minerals such as chalcopyrite, galena and sphalerite were completed around major process streams. Various conclusions were drawn relative to possible improvements of the circuit. For example, it was determined that current flotation conditions in the copper roughers are not all that amenable to fines recovery and that column flotation may proved to be of some benefit.
- Benefit:** Various recommendations were outlined for possible improvement of the Brunswick Mining and Smelting's concentrator. Such work has provided a direction for future optimization, with a view to improving recovery. As well, the assessment procedures used may have some relevance to other base metal producers in the Province eg. Heath Steele and Caribou.

MISP Project 8608-21P5

Title: "Pyrite Flotation"

MISP Contribution: \$16,850

Total Project Expenditures: \$67,405

Sub-contractor: In-house project

Objective: To determine the technical feasibility of producing a marketable pyrite concentrate.

Scope: Work consisted of pyrite classification and flotation experiments on a pilot scale using mill tailings as the feed.

Results: Pyrite concentrate of market grade (42% Fe, 49.5% S) was produced on a pilot scale using a hydrocyclone as a preconcentrator for coarse pyrite recovery from tailings prior to froth flotation.

Benefit: Brunswick Mining and Smelting was in discussions with a US firm regarding a market for this product (pyrite concentrate). Sale of pyrite would increase company revenue and possibly lessen the problem of acid drainage to the environment.

MISP Project 8609-21P5

Title: "Pressure Filtration Evaluation"

MISP Contribution: \$19,178

Total Project Expenditures: \$38,357

Sub-contractor: In-house project

Objective: To evaluate the potential of a verti-press pressure filter for the dewatering of fine-grained lead concentrates.

Scope: A test machine (verti-press filter) was rented from a supplier and tested on lead concentrates, in which such parameters as production rate, air consumption, product moisture and cycle time were considered. The results were compared to other filters (eg. Iarox) and formed the basis for design and scale-up to production levels. As well, a preliminary economic evaluation was carried out.

Results: Verti-Pressure filter showed considerable promise for applications to lead and other base metal concentrates. It is mechanically simpler than the various other types on the market and has potential for better availability and reduced maintenance costs.

Benefit: Brunswick Mining and Smelting has recommended further assessment and application of this pressure filter type to its operations, mainly because it affords favourable cost benefits.

MISP Project 8702-21P5

Title: "Purification of Zinc Concentrates"

MISP Contribution: \$30,794

Total Project Expenditures: \$61,588

Sub-contractor: University of Toronto

Objective: To investigate the causes of zinc concentrate contamination and to evaluate the potential for improvements by column flotation.

Scope: Included size, chemical, magnetic susceptibility, and mineralogical analysis of zinc concentrate products. As well, in-plant flotation experiments were conducted by the University of Toronto using a 3.8 cm dia. x 6 m. high column using the feed to the 2nd zinc cleaner as the feed material for the column.

Results: Concluded that variances in the zinc grade and recovery relationship were due to varying zinc circuit feed grade and/or varying grind of the material. With respect to the column flotation work, it was determined that entrainment accounts for 20 to 40% of the pyrite recovered in the 2nd zinc cleaner and that the major proportion is accounted for by actual flotation (40 to 50%) of the pyrite species.

Benefit: Determined that a zinc cleaning circuit employing column flotation has potential to reduce pyrite recovery to the final concentrate by 20 to 40%, thereby improving on overall zinc grade with presumably no penalty on recovery.

5.3 Maritime Resource Research Ltd.

This is a junior mining company involved with exploration and mineral property assessment. One of its major involvements in New Brunswick is the work it is doing on the Plymouth Manganese deposit, near the town of Woodstock.

Assistance of \$50,000 under MISP was provided to conduct a resource assessment of this manganese deposit and accounted for a contribution of 38% to total project expenditures.

MISP Project 8703-21J4

Title: "Further Characterization of Plymouth Manganese Deposit"

MISP Contribution: \$50,000

Total Project Expenditures: \$132,101

Sub-contractor: Ideal Drilling Ltd.

Objective: To firm up grade and tonnage of manganese and to determine the present of other interesting minerals/elements

Scope: Included trenching and diamond core drilling (2086 feet over four holes) at selected sites pertaining to the mineralized zone. Core samples were logged and selected sections assayed for manganese and other elements. The samples were analyzed for a total of 58 elements. The data was computed and tonnage figures presented for proven, probable and possible ore reserves. A three-dimensional model of the deposit was also developed.

Results: Approximately 9.5 million tons of probable ore tonnage grading 12% Mn were delineated. The grade was found to be about 60% higher than that suggested by previous studies.

Benefit: Completion of the work has increased the prospects of further development of this manganese property.

5.4 Mispec Resources Inc.

Mispec is a junior company having mineral rights in both the Cape Spencer and Mount Pleasant areas. Their interests lie mostly with their Cape Spencer gold property, which is located adjacent to the Gordex heap lead operation. The company is owned by the McNamara family of Saint John and has recently been listed on the Montreal stock exchange.

Approval was given to carry out two geological projects on the Mispec property at Cape Spencer. MISP assistance totalled \$85,000, or 38% of the total project expenditures of \$226,565.

MISP Project 8704-21H4

Title: "Extension of Cape Spencer Gold Deposit"

MISP Contribution: \$50,000

Total Project Expenditures: \$128,080

Sub-contractor: Long Year Drilling Ltd.
Dick Mann (Consulting geologist)

Objectives: To extend the reserves of gold mineralization of the Road Zone and to confirm the grade of the enriched surficial expression of the same zone.

Scope: Included diamond core drilling and trenching in vicinity of the deposit. Core and trenched samples were logged, and selected sections or samples assayed for gold. Probable tonnage figures were estimated as was the grade of the surface mineralized material.

Results: Probable tonnage of the deposit was increased by about 30%, with current estimates putting the total tonnage at around 1.0 million tonnes. Grades of the surface material were estimated to be .6 gms/tonne. Deeper drilling reported higher grades (> 1 gm/tonne).

Benefit: Encouraged the company to prepare a property prospectus with the assistance of MPH Geoconsultants, for the purpose of listing the company on the Montreal stock exchange. This was initiated to raise additional funds for further development.

MISP Project 8808-21H4

Title: "Extension of Cape Spencer Gold Deposit - Phase II"

MISP Contribution: \$35,000

Total Project Expenditures: \$98,485

Sub-contractor: Long Year Drilling Ltd.
MPH Geoconsultants

Objective: To further evaluate the scope and grade of the road zone deposit as a follow up of MISP Project 8704-21H4.

Scope: Work entailed in-fill drilling around holes drilled in the previous year, as well as deeper drilling in vicinity of the richer gold zone encountered by Gordex Minerals Ltd. The latter was to show that this richer zone extends onto the Mispec property in line with the Road Zone.

Results: Seven holes in total were drilled in the vicinity of the Road Zone for a total of 1015m of drilling. Limits of the zone have been well

defined by the completion of this and previous work. In general, the grades and coherence of the upper mineralized zones can be seen to increase with depth.

Benefit: Increased the resource knowledge of the property and has given the company direction for further work.

5.5 Dickenson Mining Ltd.

This company operates a limestone kiln at Havelock for lime (CaO) production and other lime containing compounds/products. The limestone is mined in an open pit adjacent to the processing facility, at the Samphill and McGee Quarries.

A single project of a geological nature was approved for a total MISP assistance of \$50,000.

MISP Project 8807-2113

Title: "Resource Evaluation of McGee and Samphill Limestone Deposits"

MISP Contribution: \$50,000

Total Project Expenditures: \$119,045

Sub-contractor: Logan Drilling Ltd.

Objective: To evaluate the extent of limestone resources of the McGee and Samphill quarries.

Scope: Included surveying, diamond core drilling and core preparation and analysis of areas peripheral to current quarry workings. A total of 3600 feet were drilled in 50 holes.

Results: Determined that high silica material overlying the northern and western areas of the McGee Quarry is in the order of 7% silica at a nominal thickness of 5 to 10 feet. Mining would require the stripping of this silica rock before blasting and quarrying. Drilling on the Samphill property to the north indicated no practical reserves. However, the Samphill east extension indicates quarry material extending at least 500 metres in that direction.

Benefit: Further understanding of the resource potential of these quarries as a source of long-term feed stock for the Havelock plant.

5.6 Canadian Occidental Petroleum Ltd.

Canadian Occidental is a Calgary based company with interests in New Brunswick pertaining to the Albert County oil shale deposits. The company is working with NB Power with respect to the demonstration plant located in Chatham for power generation using a blended feed stock of coal and shale. An agreement was reached between the two parties wherein Canadian Occidental will supply NB oil shale having certain minimum "free" calcium contents for desulpherization purposes.

Approval was given under MISP for Canadian Occidental to carry out one project pertaining to the Albert County oil shale. This area is known to contain the highest grade oil shale in the country.

MISP Project 8801-21H15

Title: "Albert County Oil Shale Deposits - Core Analysis"

MISP Contribution: \$10,499

Total Project Expenditures: \$20,998

Sub-contractor: Three-D Geoconsultants Ltd.

Objective: To analyze readily available oil shale core to determine oil and "free" calcium contents.

Scope: Encompassed a sampling campaign of existing oil shale core held by DNRE of the Albert County deposit. Selected samples were assayed for oil shale and "free" calcium (CaCO_3 , for example) contents by standard analytical methods. Four zones were assessed as part of the study; these being (1) the upper shale zone, (2) the Albert mines zone, (3) clay marlstone zone and (4) the dolomite marlstone zone.

Results: Average contents of oil and reactive calcium in the above mentioned zones were determined to be (1) 36.10 l/tonne and 7.93%, (2) 79.21 and 7.61, (3) 21.84 and 4.01 and (4) 51.46 and 5.57, respectively. These results have revealed areas that would be of interest to NB Power as possible oil shale feedstock for their demonstration plant.

Benefit: Provided the company and NB Power with a knowledge of the quality of Albert County oil shales for power generation and other possible applications.

5.7 Corona Corporation

Corona is a major Canadian mining Company, with particular interest in the precious metal business. They hold many mineral claims in New Brunswick, mostly in the Northern region, for which they are evaluating as potential gold/silver deposits. The most promising of their properties is the Elmtree gold deposit located just north of Bathurst.

Two geological type projects were approved for a total MISP assistance of \$100,000, accounting for approximately 36% of the total expenditure figure of \$277,366. These activities focused on two encouraging deposits held by Corona; Elmtree and Quebec Sturgeon.

MISP Project 8708-21P13

Title: "Characterization of Quebec Sturgeon Deposit"

MISP Contribution: \$50,000

Total Project Expenditures: \$137,652

Sub-contractor: Ideal Drilling Ltd.

Objective: To re-evaluate the Quebec Sturgeon deposit for its potential in hosting precious metals (gold /silver).

Scope: Included diamond core drilling, trenching and assay analysis of selected core samples. In particular, the Deposit ONE and the Hachey zones were tested along their westerly trending extensions.

Results: Gold intersections identified showed significant gold values in the range of 0.15 oz/tonne, but the sections were too narrow (< 1 meter) to be all that promising. As well, the gold association was very erratic and lacked continuity. Arsenopyrite was the predominant host mineral, suggesting a refractory based association of gold.

Benefit: Provided a clearer understanding of the potential of this area.

MISP Project 8709-21P13

Title: "Extension of Elmtree Gold Deposit"

MISP Contribution: \$50,000

Total Project Expenditures: \$139,714

Sub-contractor: Ideal Drilling Ltd.

Objective: To test the extent of the deposit at depth and along its easterly rake.

Scope: Entailed diamond core drilling, trenching and assay analysis of

- Results:** selected samples of the West Gabbro zone in an easterly direction. The three-dimensional geological model of the deposit was updated. Resulting work has closed off the mineralized sill to the east and has increased the reserves to the 750 ft. level. A new gold zone carrying 0.13 oz/tonne was intersected within a fault structure south of the Elmtree deposit.
- Benefit:** Although the deposit remains uneconomic at the present time, the current work has shown the potential for increased reserves.

5.8 Eastern Gypsum Ltd.

This is a New Brunswick based company which has proposed the construction and operation of new wall board plant at McAdam. The company is owned by the Depow family of Oromocto and has acquired financing from abroad as well as government guarantees through Atlantic Canada Opportunities Agency (ACOA) to support the wall board project. The mineral rights to four known gypsum deposits located within southern New Brunswick are held by Eastern Gypsum; those being, (1) Hillsborough, (2) Demoiselle, (3) Upham and (4) Fox Hill.

Approval was given for the company to conduct a geological survey of these gypsum deposits in support of the proposed wall board plant. Gypsum is used as the main component in wall board production.

MISP Project 8712-21H15/13

Title: "Survey of New Brunswick Gypsum"

MISP Contribution: \$33,877

Total Project Expenditures: \$67,754

Sub-contractor: Ken Whaley (consulting geologist)

Objective: To investigate the tonnage and grade of selected gypsum deposits in Southern New Brunswick.

Scope: Activities included diamond core drilling (30 holes) and core analysis for gypsum and halide contents of various deposits held by Eastern Gypsum; namely, Foxhill and Upham near Sussex and Demoiselle and Hillsborough near Moncton. High grade samples were tested for their suitability in wall board production. As well, geological plans and sections were updated for grade and tonnage estimates.

Results: Tonnage of high grade gypsum was identified at both the Hillsborough (King Quarry) and Demoiselle properties in the order of 200,000 tonnes at each site. Further geological assessment is

Benefit: necessary to firm up additional tonnage at these sites as well as to determine the resource capabilities of the Upham and Foxhill deposits. The latter deposits returned good quality gypsum as well. Further knowledge of the resource capabilities of these gypsum properties in support of a wall board plant at McAdam.

5.9 LAC Minerals Ltd.

LAC is a major Canadian Mining company with diversified interests in both the minerals and oil sectors. After closure of the Mount Pleasant Tungston facility near Saint George, NB, LAC formed a joint venture with Billiton, the owners of the mine, wherein it was agreed that LAC would conduct a feasibility study of the adjacent tin deposit.

This feasibility was completed in 1987 at which time it was concluded that the current price of tin coupled with the resources estimated would not reflect on economic operation. Subsequently, LAC proceeded to evaluate the resource aspect more extensively in an effort to improve the economics by introducing further economies of scale.

Approval was given to carry out two geological projects pertaining to the Mt. Pleasant tin deposit for a total MISP contribution of \$100,000 or 31% of total project expenditures.

MISP Project 8713-21G7

Title: "Extension of Mt. Pleasant Tin Deposit - Phase I"

MISP Contribution: \$50,000

Total Project Expenditures: \$144,288

Sub-contractor: Long Year Drilling Ltd.

Objective: To test the extension of the Mt. Pleasant tin deposit to the north east of the delineated zone.

Scope: Geological program consisted of 1600 m of diamond core drilling divided over three holes, approximately 1km northeast of the tin bearing North Zone at Mount Pleasant. Assays of selected core samples were compiled and the data compared to previous radiometric and IP anomalies thought to be associated with significant tin mineralization.

- Result:** Showed that tin bearing granites have a larger areal extent than expected. However, no significant tin deposits were found that could have an immediate impact on the viability of the North tin Zone.
- Benefit:** Confirmed the wide areal extent of tin mineralization at Mt. Pleasant and should encourage further exploration for economic tin resources.

MISP Project 8714-21G7

Title: "Extension of Mt. Pleasant Tin Deposit - Part II"

MISP Contribution: \$50,000

Total Project Expenditures: \$177,807

Sub-contractor: Long Year Drilling Ltd.

Objective: To test the extension of Mt. Pleasant tin deposit to the south east of the delineated zone.

Scope: Similar to MISP Project 8713-21G7. Total of 1713 m were drilled divided over three holes.

Results: All three holes intersected a hitherto unknown and separate granite which rises to within 260m from the surface. Significant tin mineralization was returned by all three drill holes. Discovery of this new granite system suggests the possibility of increased resources of tin mineralization.

Benefit: Discovery of a separate, well mineralized granite body provides encouragement for possible identification of more tin mineralized zones.

5.10 Summary

Twenty-two of the twenty-three approved MISP projects discussed in this section reflected work programs dealing with either process optimization, new product development or extension/assessment of mineral reserves. The other project can be classified as a mining initiative since it dealt with mine survey equipment improvements at the Lake George Antimony Mine. MISP project funding totalled \$771,491 with over all project expenditures amounting to \$2,038,964.

Eight projects falling under process optimization and new product development accounted for \$181,615 of MISP funding and \$431,903 in overall project expenditures. Six projects completed by Dominion Explorers Inc. (two) and Brunswick Mining and Smelting (four) addressed process optimization of their respective operations while the other two projects regarding new product development encompassed a technical

assessment of producing antimony metal at Dominion and a saleable pyrite concentrate at Brunswick Mining and Smelting.

The geological investigation projects accounted for the majority of activity under the program. A total of \$585,376 of MISP funding was expended on such work, which resulted in overall project expenditures of \$1,582,594. Fifteen projects of this nature were completed and included the participation of eight companies having mineral interests in the province: namely, Dominion Explorers Inc., Maritime Resource Research Ltd., Mispec Resources Inc., Corona Corporation, LAC Minerals Ltd, Eastern Gypsum Ltd., Canadian Occidental Petroleum Ltd., and Dickenson Mines Ltd. Apart from Dominion, these companies represent the non-operating, grass-roots developers within New Brunswick.

Table 3 is a summary of MISP and total expenditures as a function of the different mineral commodities investigated under MISP projects. Of the eight commodities covered, including gold, tin, antimony, manganese, oil shale, gypsum, limestone and base metals (eg. copper, lead, and zinc), the largest expenditure was on gold accounting for \$241,000 of MISP funding and \$628,017 in total project payouts.

6.0 REJECTED APPLICATIONS/PROJECTS

Of the thirty five applications submitted for assistance over the duration of the MISP, twelve were rejected for a variety of reasons. This translated into an approval record of 65% of the total number of applications received.

Table 4 is a listing of the projects that were turned down for assistance. Included in the table is information on the objective of projects and the reasons why they were rejected along with the applicant's company name and the amount of MISP funding requested.

A major reason for rejection was the lack of resource potential within the context of "an established mineral deposit". Falling in this category were various junior companies

TABLE 3

MINERAL COMMODITIES INVESTIGATED UNDER THE
MINERAL INVESTMENT STIMULATION PROGRAM

<u>Commodity</u>	<u>MISP Funding</u>	<u>Total Expenditures</u>	<u>%</u>	<u>Proponents</u>
Gold	\$241,000	\$628,017	30.7	Dominion Explorers Inc. Corona Corporation Mispec Resources
Tin	100,000	322,095	15.8	LAC Minerals Inc.
Antimony	139,293	390,115	19.4	Dominion Explorers Inc.
Manganese	50,000	132,101	6.5	Maritime Resource Research Ltd.
Oil Shale	10,499	20,998	1.0	Canadian Occidental Petroleum Ltd.
Gypsum	33,877	67,754	3.3	Eastern Gypsum Ltd.
Limestone	50,000	119,045	5.8	Dickensen Mines Ltd.
Base Metals (copper, lead, and zinc)	146,822	358,839	17.5	BM & S
	—	—	—	
TOTAL	\$771,491	\$2,038,964	100	

TABLE 4

Listing of Rejected MISP Applications/Projects

<u>Project No.</u>	<u>Objective</u>	<u>Company</u>	<u>MISP Assistance Requested</u>	<u>Reason(s) for Rejection</u>
8601-21172	To conduct flotation tests on beryl from Zealand station deposit	Shediac Bay Resources	\$20,540	No resource potential.
8102-21185	To study the flotation of graphite from Golden Grove deposit.	Glenlivet Resources Ltd.	\$50,000	No estimate of resource potential when application was made.
8605-211810	To explore a silica occurrence at Nantucket and to conduct a local market study.	Maritime Resource Research Ltd.	\$50,000	Deposit did not qualify as "Established Mineral Deposit".
8701-2103	To test bacterial leaching of St. Stephen nickel deposit.	Gordal Investments Ltd. ^a	\$48,125	Project was processed by Commerce and Technology for assistance.
8710-21113	To explore gold claims contained within the Rocky-brook area.	Corona Corporation	\$50,000	No resource potential in the context of "Established Mineral Deposit".
8711-2101	To explore for gold in the Dipper Harbour area.	Goldfluor Explorers Ltd.	\$50,000	No resource potential in the context of "Established Mineral Deposit".
8802-21014	To explore for additional antimony reserves.	Dominion Explorers Inc.	\$50,000	Limited MISP budget.
8803-21014	To explore for additional antimony reserves.	Dominion Explorers Inc.	\$50,000	Limited MISP budget.
8804-2100	To batch test the extraction of gold and silver from Caribou ores.	Caribou Mining Ltd.	\$ 6,247	Study completed before submission of MISP application.

TABLE 4 (continued)

8805-2133	To assess resource potential of the McGee limestone quarry	Lafarge Canada Ltd.	\$30,000	Application withdrawn by company.
8809-2103	To leach test the St. Stephen nickel deposit (similar to NISP Application 8701-2103)	Coburn Mining Corp.*	\$42,942	Pending litigation with Commerce and Technology regarding previous assistance.
8810-2109	To prove up tonnage and grade of base metal sulphides at Murray Brook.	Nova Gold Resources Ltd.	\$50,000	Limited NISP budget.

* Coburn Mining Corp. and Gerdal Investment Ltd. are related companies and are owned by the same principals.

such as Maritime Resource Research and Goldfluor Exploration who applied for assistance on the basis of discovering new mineral deposits. Others, such as Shediac Bay Resources and Glenvet Resources, proposed to carry out process development studies without first firming up the resource potential of their deposits.

As well, the relationship between the Department of Natural Resources and Energy and the Department of Commerce and Technology with respect to project funding was responsible in a couple of instances for MISP project rejections. Commerce and Technology is responsible for the administration of the Industrial, Innovation and Technology sub-agreement (under the ERDA) which provides funding for mineral-related projects falling within the realm of processing. Therefore, cooperation was required between appropriate representatives of both departments to ensure a coordinated effort and avoid any duplication.

MISP dealt primarily with processing initiatives encompassing mineral beneficiation while Commerce and Technology addressed projects concerning chemical processing. However, there were exceptions. The antimony smelting study (MISP Project 8604-21G14) was more of a chemical processing initiative and should have fallen under Commerce and Technology. But due to the small scale nature of the project (\$10,000), it was agreed that the MISP would be better equipped to handle this situation.

The leaching work proposed by Gordel Investments Ltd. (Project 8701-21G3) is another example of the cooperation between the two departments. In this case, two applications were simultaneously filed by the company for assistance to Commerce and Technology and to Natural Resources and Energy (under the MISP). As the project was better suited to the mandate of Commerce and Technology, it was agreed that they would pursue the project. MISP Project 8809-21G3 (Leaching of St. Stephen nickel) reflected a similar situation.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

The Mineral Investment Stimulation Program was found to be an effective means of stimulating development activity within the provincial minerals industry. MISP project expenditures of approximately \$772,000 resulted in total project payouts of nearly \$2,040,000. Average MISP contribution and total project expenditures per project were \$34,000 and \$89,000, respectively.

A total of 23 projects were approved based on applications filed by nine companies having mineral-related interests in the province:

- (1) Dominion Explorers Inc.
- (2) Brunswick Mining and Smelting
- (3) Maritime Resource Research Ltd.
- (4) Mispac Resources Inc.
- (5) LAC Minerals Ltd.
- (6) Corona Corporation
- (7) Eastern Gypsum Ltd.
- (8) Canadian Occidental Petroleum
- (9) Dickenson Mining Ltd.

Twelve other applications were received, but were rejected for assistance based primarily on resource inadequacies in the context of "Established Mineral Deposits" and on limited MISP project funding, especially in the latter two years of the program.

Collectively, the MISP projects placed emphasis on eight mineral commodities, including gold, antimony, limestone, gypsum, manganese, base metals (eg. copper, lead, and zinc), oil shale and tin. Based on the expenditure figures, gold commanded the highest proportion of project effort.

The MISP was designed as an industry-driven assistance program and the projects were considered to be consistent with the development priorities of industry. There was considerable activity in resource evaluation and mineral processing but the program saw little activity in process and market development of new or developing deposits.

This was a consequence of having many of the participating companies or developers involved with furthering the resource potential of their respective deposits as a prerequisite to further work like process development initiatives, for example.

Review and approval of MISP applications required input and authorization from persons at various technical and management levels in both the Department of Natural Resources and Energy and Energy, Mines and Resources. The turn around time for review and approval or rejection of applications/projects ranged from three to four weeks on average. The provincial Geological Survey's Branch played an integral role in assessing the merits of many of the geological-type projects, in collaboration with their federal counterparts, GSC (Geological Surveys of Canada).

It was found that prudent promotion of the program was a key element in its success. Many companies were concerned with the influence government would or might have on the execution of their work programs if MISP funding were secured. However, once the details of and the process associated with the MISP were made known and suitably discussed, virtually all of the apprehension shown by potential applicants was dispelled.

In general, the MISP provided financial assistance to the minerals industry on a project by project basis as a vehicle to promote development of this industry. The industry as a whole has responded quite well to the program and has expressed support for its continuation under the next Mineral Development Agreement, which is currently under negotiation by the two levels of government.

7.2 Recommendations

Having had the opportunity to observe the performance of the program as a mineral development stimulus and in response to industry's input, it is recommended that:

- (1) the same or a similar program be supported under MDA II based at least, on a yearly budget of \$200,000;

- (2) the program scope be expanded to incorporate project areas dealing with mine environmental and reclamation concerns as well as those pertaining to mine improvements and mine safety. Other areas such as feasibility studies of new mineral operations should also be considered;
- (3) further clarification of the relationship between the Department of Commerce and Technology, ACOA (Atlantic Canada Opportunities Agency) and the Department of Natural Resources and Energy regarding mineral development assistance is needed in preparation for MDA II;
- (4) a review of various funding limits and cost sharing ratios for MISP projects be completed to optimize potential benefits of a second generation program. For example, it may be appropriate to offer added incentive to non producers relative to established operators, with the aim of increasing the number of operators in the province through new deposit development; and
- (5) the administration of any future similar program(s) remains with the Department of Natural Resources and Energy so as to develop and maintain the required close contact with the minerals industry during the execution of the program and of individual projects approved thereunder.

8.0 FINAL REPORT LISTING

<u>Project No.</u>	<u>Title/Author</u>	<u>Release Date</u>
8604-21G14	<u>"Smelting of Durhamm Resources Stibnite Concentrate to Produce Metallic Antimony"</u> J. M. Skeaff, October 1986	Dec., 1988
8603-21G14	<u>"An Investigation of the Recovery of Antimony From Samples Submitted by Durham Resources Inc. Progress Report No. 1 and 2"</u> R. G. Williamson, Sept./Dec., 1986	Dec., 1988
8607-21P5	<u>"Sampling Campaign For the Comprehensive Study of Metal Distributions in the Brunswick Mill and Concentration"</u> M. Coleman and Ross Gilders, March 1987	March, 1989
8610-21G14	<u>"Antimony Flotation in an SK15 Air Coarse Flotation Machine"</u> V. F. Hendricksen, December 1987	Dec., 1989
8704-21H4	<u>"Extension of Cape Spencer Gold Deposits"</u> D. M. Mann, December 1987	Dec., 1989
8608-21P5	<u>"Pilot Plant Investigation of Pyrite Recovery"</u> C. Bazin, D. W. Scott and L. J. Surges, January 1988	Jan., 1990
8703-21J4	<u>"Further Characterization of Plymouth New Deposit"</u> G. C. Roberts and J. D. Prince, February 1988	Feb., 1990
8801-21H15	<u>"Albert Mines Oil Shale Deposit-Drill Core Re-sampling and Calcium Analysis"</u> Dwight Ball, August 1988	May, 1990
8708-21P13	<u>"Further Characterization of the Precious Metal Potential of Mineral Deposits Associated with the Rocky Brook-Mill Stream Fault System"</u> P. Dimmell and J. Duncan, September 1988	Sept., 1990
8807-21I3	<u>"Exploration Program of Havelock Basin"</u> K. D. Peden, September, 1988	Sept., 1990

8606-21P5	<u>"Comprehensive Mineralogical Survey of the Brunswick Mining and Smelting Corporation's Concentrator"</u> Michele Coleman, November 1988	Nov., 1990
8609-21P5	<u>"Evaluation of Verti-Press Pressure Filter for Lead Concentrate Development"</u> B. Randall, November 1988	Nov., 1990
8713-21G7	<u>"Extension of Mt. Pleasant Tin Deposit - Part I"</u> Gustaaf Kooriman, December 1988	Dec., 1990
8714-21G7	<u>"Extension of Mt. Pleasant Tin Deposit - Part II"</u> Gustaaf Kooriman, December 1988	Dec., 1990
8705-21G14	<u>"Gold Assessment at Lake George"</u> C. Morrissy, December 1988	Dec., 1990
8709-21P13	<u>"Extension of the Elmtree Gold Deposit"</u> J. F. Duncan and D. Hoy, January 1989	Jan., 1991
8806-21G14	<u>"Further Characterization of Drill Core at Lake George"</u> C. Morrissy, January 1989	Jan., 1991
8706-21G14	<u>"Reserves Extension of Antimony - Part I"</u> C. Morrissy, January 1989	Jan., 1991
8707-21G14	<u>"Reserves Extension of Antimony - Part II"</u> C. Morrissy, January 1989	Jan., 1991
8808-21H4	<u>"Road Zone Gold Project - Cape Spencer"</u> P. A. Tyler, February 1989	Feb., 1991
8712-21H/15	<u>"Survey of New Brunswick Gypsum"</u> K. D. A. Whaley, March 1989	March 1991
8702-21P5	<u>"Purification of Zinc Concentrates"</u> G. S. Dolby and Castillo, January 1989	April, 1991
8811-21G14	<u>"Mine Survey Equipment Improvement"</u> W. Messer, December 1989	Dec., 1991

APPENDIX A
MISP Brochure

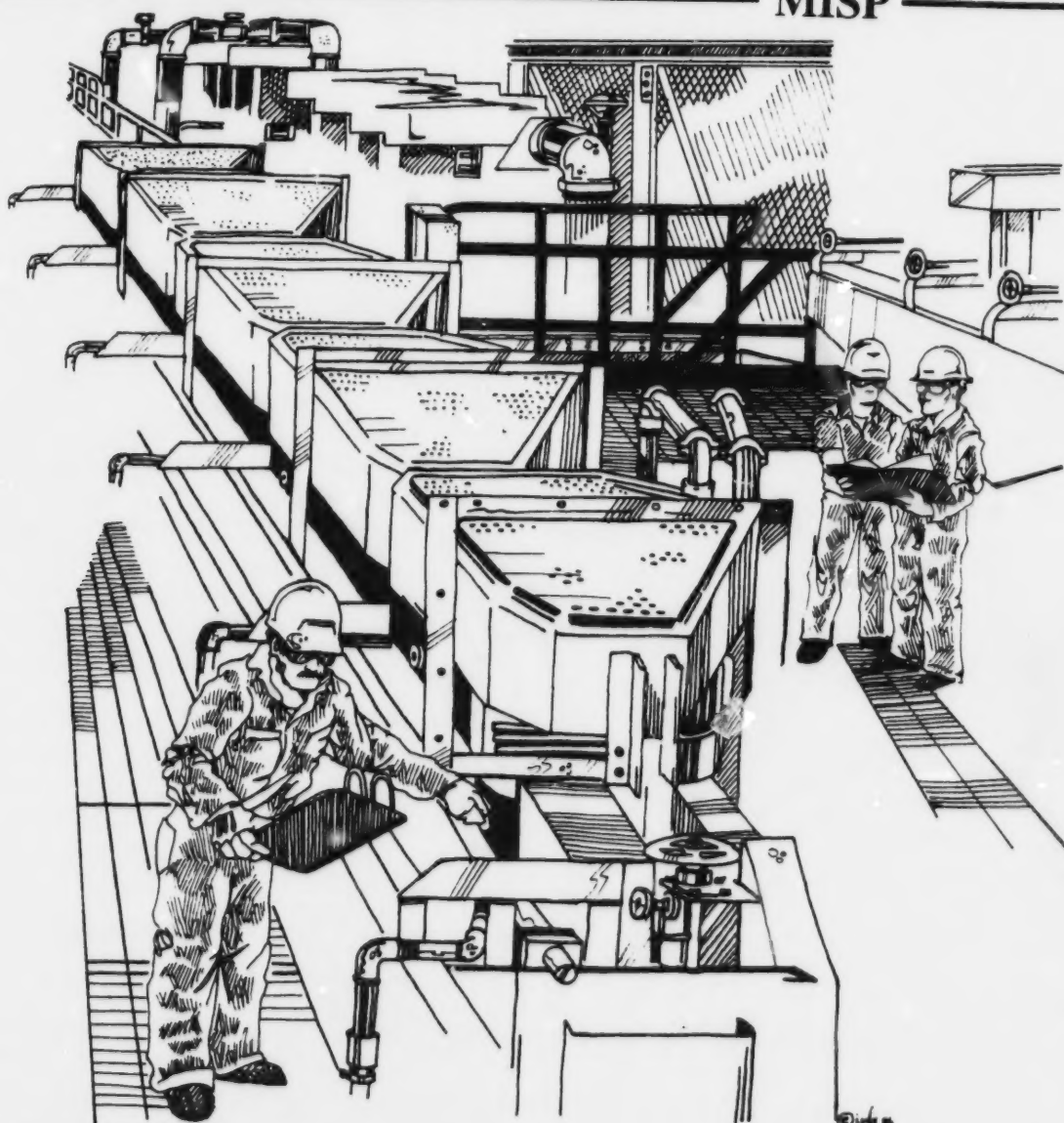


Canada-
New Brunswick
Mineral
Development
Agreement

Entente Canada-
Nouveau-Brunswick
L'Exploitation
Minérale

MINERAL INVESTMENT STIMULATION PROGRAM

MISP



Canada



New Brunswick

WHAT IS MISP?

The Mineral Investment Stimulation Program (MISP) provides financial assistance to mining and processing companies and individuals interested in the development of New Brunswick's mineral resources.

MISP is a direct private sector assistance program administered through the five-year Canada/New Brunswick Mineral Development Agreement. The main objective of the Agreement is to promote development of the Province's mineral resources. MISP contributes to that objective by assisting companies and individuals to enhance the viability of existing resources, improve productivity, and establish and expand long-term markets.

WHO IS ELIGIBLE?

Any firm or individual holding mineral rights in the Province and/or actively involved in mining related activities in New Brunswick is eligible for assistance from MISP.

WHAT PROJECTS ARE ELIGIBLE?

Eligible projects would include:

1. Investigations of an established mineral deposit to help define or extend the reserves and to carry out ore characterization tests and beneficiation studies.

Investigations to be defined as in-plant-controlled testing, bench-scale testing and/or literature surveys.

For the purposes of MISP, "an established mineral deposit" is defined as a body of mineral material or concentration of mineral(s) that:

- is presently in production, or
- ceased production as a result of geological conditions or market factors during the past ten years, or
- is professionally evaluated by the Mineral Resources Division staff of the Department of Forests, Mines and Energy as having production potential.

2. Mineral processing studies to:

- improve mineral output
- improve product quality
- reduce unit operating cost
- investigate new technologies

3. Market Studies to determine:

- product demand
- new product opportunities
- product specifications required by consumers
- economic feasibility of competing in a specific market.

4. Market promotion of specific mineral commodities or products.

5. Studies of a company's production and management systems to identify opportunities to improve productivity.

MISP does not cover mineral exploration which has the objective of discovering mineral deposits.

There is no limit on the number of projects for which a firm or individual may request assistance.

HOW WILL PROJECTS BE ASSESSED?

A federal/provincial committee will assess projects using the following criteria:

1. Economic feasibility of the proposal.
2. Job creation potential of the proposal.
3. Other benefits to the Province.
4. Technical competence to be directed at the proposal.
5. Capability of the applicant to implement recommendations resulting from work on the proposal.
6. Project duration.

ALLOWANCE COSTS

All reasonable expenditures related to a project will be acceptable. These include:

- Salaries and wages
- Expenses
- Contracted services
- Supplies

WHAT FUNDS ARE AVAILABLE?

A total of \$1.0 million in Federal funding has been allocated to MISP over the period April 1st, 1986 to March 31st, 1989.

HOW WILL PROJECTS BE FINANCED?

MISP will contribute up to 50 percent of the costs of the approved project. MISP contributions are limited to a minimum of \$5,000 and a maximum of \$50,000 per project. If other government assistance is received for the project, the MISP contribution will cover a maximum of 50 percent of the remaining costs incurred by the applicant.

MISP contributions will be made in three installments:

1. Thirty percent of the contribution will be advanced when the project has been approved and the terms and conditions of assistance have been accepted by the recipient.
2. A similar amount will be approved when the recipient has documented expenditures equal to three times the amount of the initial MISP contribution and submitted an interim progress report.
3. The balance of the contribution will be approved when the recipient has submitted 1) an itemized statement of incurred expenditures equal to the total cost of project, and 2) an acceptable report documenting the work. All reports will be held confidential for two years.

MISP contributions are administered by the Mineral Resources Division of the New Brunswick Department of Forests, Mines and Energy.

HOW DO I APPLY?

Fill out an MISP Application for Assistance form and return it to the New Brunswick Government office listed below.

New Brunswick Department of Forests, Mines and Energy
Mineral Resources Division
P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1
Attention: Co-ordinator, MISP
Telephone: (506) 453-2206

APPENDIX B

Evaluation Format

MINERAL INVESTMENT STIMULATION PROGRAM-PROPOSAL EVALUATION FORMAT

The mineral investment stimulation program (MISP) is aimed at providing financial assistance to industry, for development of beneficiation circuits and establishing the commercialization of known reserves. The MIS program covers projects under the following classification system.

- A. Process Studies: any testing related to the beneficiation of ore (communion and ore dressing systems to improve on cost throughput and recovery or investigate new methods of mineral extraction.
- B. Market Studies: markets only include mineral concentrates or beneficiation products; having no chemical alteration to concentrate mineralogy.
- C. Productivity Studies: include studies of a company's production and management systems to improve product grade and quantity. Management systems may include process control, automation and personnel.

The assessment of project proposals will be carried out using the attached scoring format. The purpose of this format is to provide,

1. consistence evaluation procedures over the period of MISP.
2. a means of selecting the best proposals in event of an over demand of MISP funding.
3. guidelines for acceptance of proposals under MISP regulations.

In order to consider proposals under the MISP grants, the proposal must fall into the project classification outlined above and must score a pass mark of 55% in each section of the criteria categories. In summary the scoring format will emphasize the following points,

- format will give a high rating to provincial processors where small operators employing less than 100 will be given a slightly higher status (however firms will be given less status for financial disorders),
- format distinguishes industry from University and Research-Development institutions with respect to project classification. The format considers the stage of development of a reserve and relates the point system to most productive project type. For example, MISP guidelines would give less status to an R&D firm doing a productivity study on its own operation.
- format has a penalty for other government grants covering the project.
- in terms of benefits to the province, non-mineral producing companies would have higher ratings as opposed to an operator trying to improve on production.
- technical competence of the proposal will be evaluated in a manner similar to contract evaluations done by Dept. of Supply and Services (DSS).
- all cost accounting has to be indicated in proposal.

The scoring format has the following categories,

1.0 CATEGORY: COMPANY (Section a to e)

a) Mining related activities (200)

1. No mining related activity in New Brunswick 0
2. University/Research and Development 75-125
3. Claim holder etc.-reserve not quantified 75-125
4. Reserve quantified - no production 100-150
5. Reserve Quantified - pilot plant operation 125-175
6. Commercial production 150-200

b) Content of Proposal (85)

Firm/Company-Status	Process Engineering	Project Type Market Studies	Productivity Survey
1. University/Research and Development	60-75	0-45	0-45
2. Claim holder etc.-reserve not quantified	0-45	70-85	0-45
3. Reserve quantified-no production plant	70-85	70-85	0-45
4. Reserve quantified-pilot plant	70-85	0-45	0-45
5. Commercial production	70-85	70-85	70-85

c) Use of government grants (25)

1. No additional grants to assist project 20-25
2. Subtract 5 points for each additional grant (equivalent to MISP grant) from a total of 20 points.

d) Financial statements/corporate information (50)

Financial Statements

		Stable	Unstable
1. large operator-company employing greater than 300	300	35-40	30-35
2. intermediate operator-company employing 100-300	100-300	40-45	25-30
3. small operator - company employing less than 100	100	45-50	20-25

e) Resource definition (90)

	Resource	
	Identified	Not identified
1. commercial probability good	80-90	60-70
2. commercial probability intermediate	70-80	50-60
3. commercial probability not good	60-70	0-50

2.0 CATEGORY: BENEFITS (Section a to d)

a) Economic feasibility (195)

NOTE: economic feasibility and productivity improvements will be evaluated on an overall production basis.
Project having the possibility of;

1. increase revenue and/or reduce unit metal production cost by a relative of 6%,	190-195
2. increase revenue and/or reduce unit metal production cost by a relative of 3-6%,	150-190
3. increase revenue and/or reduce unit metal production cost by a relative of 0-3%,	110-150
4. no economic value of project,	0-110

b) Productivity Improvements (85)

NOTE: Productivity improvements can be regarded as an increase in product grade, recovery, and solid throughput with revised production practises. However an improvement on one variable must not have a negative effect on other variables.

For "market studies" a productivity improvement can be regarded as 100%; therefore a score of 85 is used.

1. improve on recovery or grade by a relative of 3% and/or throughput by 10%	70-85
2. an improvements on recovery grade and throughput	45-70
3. no improvement of productivity	0-45

c) job creation potential (50)

1. increase jobs by a relative of 5% from present value	40-50
2. increase jobs by a relative of 0-5% from present value	25-40
3. create no additional jobs	0-25

d) development of new methods, technologies, and/or new products (20)

1. high potential	15-20
2. intermediate potential	11-15
3. low potential	0-11

3.0 CATEGORY: TECHNICAL (Section a to c)

a) approach and methodology (90)

1. proposal demonstrates an excellent creative approach and methodology-inovative approach.	75-90
2. proposal demonstrates an appreciation of approach and methodology-sound approach.	50-75
3. fails to demonstrate an approach to objectives	0-50

b) team organization (30)

1. proposal outlines an outstanding composition, organization and management system	25-30
2. proposed team adequate for project	15-25
3. proposal does not address itself to team organization	0-15

c) adequacy of work plan, schedule (30)

1. work plan, schedule stated and within duration of MISP funding	15-30
2. work plan, schedule not included or not within MISP duration	0-15

4.0 CATEGORY: COST (Section a to b)

a) eligible expenditures (35)

For a score of 35 the proposal should include;

- salaries and wages
- expenses for travel and office
- contracted services cost
- service and supplies
- MISP contribution must exceed \$5000 and a maximum of \$50,000

b) quotes for goods and services exceeding \$5000 (15)

1. 3 quotes present for each item or no quotes required	15
2. no quotes present if required	0

NOTE: The criteria used for funding will be based on point assessments.

750-1000 points	50% funding recommended
600-750 points	40-50% funding recommended
550-600 points	30-40% funding recommended

MINERAL INVESTMENT STIMULATION PROGRAM - PROPOSAL ASSESSMENT CRITERIA

CANADA-NEW BRUNSWICK

MINERAL DEVELOPMENT AGREEMENT

PROJECT NUMBER: _____

DATE RECEIVED: _____

REQUEST FOR PROPOSAL - PROJECT: _____

NAME OF APPLICANT: _____

APPLICANT REPRESENTATIVE(S): _____

PROJECT CLASSIFICATION: _____

TOTAL PROJECT FUNDING: _____

PROPOSED FUNDING UNDER MISP: _____

(_____ % OF TOTAL PROJECT)

DATE PROJECT TO COMMENCE: _____

DATE PROJECT TO BE COMPLETED: _____

PROPOSALS ARE TO BE EVALUATED ON THE BASIS OF THE FOLLOWING CRITERIA CATEGORIES;

	MAX. POINTS	ASSESSMENT
1.0 COMPANY		
a) holder of mineral rights and/or mining related activities	200	
b) content of proposal - project type	85	
c) use of other government grants for project	25	
d) financial statements/corporate information	50	
e) resource definition/commercial probability	90	
	<u>450</u>	==
2.0 BENEFITS		
a) economic feasibility	195	
b) productivity improvements	85	
c) job creation potential	50	
d) development of new methods, technologies, and/or new products	20	
	<u>350</u>	==
3.0 TECHNICAL		
a) approach methodology	90	
b) team organization	30	
c) adequacy of work plan, performance schedule	30	
	<u>150</u>	==
4.0 COSTS		
a) eligible expenditures	35	
b) quotes for goods and services exceeding \$5000	15	
	<u>50</u>	==
Total	<u>1000</u>	==
5.0 COMMENTS ON PROPOSAL		

PROPOSAL EVALUATED by _____ DATE _____

Amount of funding recommended by assessment of proposal: _____

6.0 FURTHER ACTION TO BE TAKEN

APPENDIX C

Form Contract

THIS AGREEMENT made the day of

BETWEEN:

HER MAJESTY THE QUEEN IN THE
RIGHT OF THE PROVINCE OF
NEW BRUNSWICK, as represented by
the Minister of Natural Resources
and Energy (hereinafter referred
to as "the Minister")

OF THE FIRST PART

AND:

(hereinafter referred to as "the
Recipient")

OF THE SECOND PART

WHEREAS the Government of Canada and the Government of
the Province of New Brunswick have entered into a Canada-
New Brunswick Subsidiary Agreement on Mineral Development dated
June 25, 1984 to jointly undertake programmes to strengthen and
diversify the mineral industry sector of the provincial economy;

AND WHEREAS by Amendment No. 8 to the aforesaid
Agreement dated June 6, 1986 the Government of Canada and the
Province of New Brunswick agreed to contribute to Firm-Specific
Assistance to be carried out by New Brunswick;

AND WHEREAS the recipient has applied for and has been
recommended to receive a financial assistance contribution in
relation to the project referred to in Schedule "A" annexed to
this Agreement subject to the terms and conditions hereinafter set
forth;

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the mutual covenants and agreements contained herein, the parties hereto agree as follows:

1. In this Agreement:

"Contribution" means the amount payable to the recipient under this Agreement;

"Eligible Costs" means approved project costs as shown in Schedule "B";

"Management Committee" means the Committee established pursuant to the Canada-New Brunswick Subsidiary Agreement on Mineral Development (1984);

"Minister" means the Minister of Natural Resources;

"Project" means the activities and work to be carried out by the recipient under this Agreement and Schedule "A" annexed to and forming a part of this Agreement;

"Project Officer" means an official of the Department of Natural Resources and Energy designated by the Minister to represent the interests of the Province of New Brunswick; and

"Province" means Her Majesty the Queen in Right of the Province of New Brunswick as represented by the Minister of Natural Resources and Energy.

2. The recipient shall carry out the project according to the provisions of this Agreement and Schedule "A" attached to and forming part of this Agreement.

3. Notwithstanding anything contained in this Agreement the total contribution payable in respect of this Agreement shall be:

(a) up to fifty percent (50%) of total eligible costs,
or

(b) up to fifty thousand dollars (\$50,000),

whichever is the lesser amount.

4. (1) Subject to clauses 3 and 9, upon approval of the project by the Management Committee and as soon as possible after execution of this Agreement, the Minister will make an initial advance to the recipient of thirty percent (30%) of the contribution under this Agreement.

4. (2) Subject to clauses 3 and 9, a second advance of thirty percent (30%) of the contribution under this Agreement will be paid to the recipient upon submission by the recipient to the Minister of the following:

- (a) a detailed statement of eligible costs incurred and paid by the recipient which eligible costs shall equal three times the initial advance outlined in clause 4 (1) above;
- (b) proof of payment of eligible costs in clause 4 (2) (a) above; including invoices, receipts and other documentation acceptable to the Minister; and
- (c) an interim progress report of the project activities submitted in a form acceptable to the Minister.

4. (3) Subject to clauses 3 and 9, the balance of the contribution will be approved and paid to the recipient upon the submission by the recipient to the Minister of the following:

(a) an itemized documentation of all eligible costs incurred and paid together with proof of payment of such eligible costs, and

(b) a final report, written in accordance with Schedule "C" and acceptable to the Minister, on the conduct of the project and such other matters associated therewith as may be required by the Minister.

5. The recipient shall commence work pursuant to the provisions of this Agreement on the day of

6. (1) The project shall be completed to the satisfaction of the Minister on or before the day of unless the date of such completion is extended by the Minister in writing or unless the recipient is prevented from completion by that date due to any cause or causes beyond the reasonable control of the recipient including strikes and lockouts. Final claims for payment shall be submitted by the recipient to the Minister not later than ninety (90) days following the date upon which the project is, to the satisfaction of the Minister, completed.

6. (2) The recipient shall keep detailed financial records and statements of funds received and expended by the recipient including accounts of capital modifications and operating costs pursuant to the provisions of this Agreement, and the recipient shall allow the Minister or authorized representatives of the Minister to have access to the financial records and statements pertaining to this project at all reasonable times upon giving reasonable notice.

7 (1). The final report required under clause 4 (3) (b) shall, to the extent permitted by law, be kept confidential by the Minister for a period of two years from the date of its receipt by the Minister and shall be written in accordance with the format set out in Schedule "C".

7 (2). No member of the House of Commons or of the Legislative Assembly shall be admitted to share or part of this Agreement or to any benefit to arise herefrom.

8. Any notice pursuant to this Agreement shall be valid if given in writing by registered letter addressed to the Minister of Natural Resources, P.O. Box 6000, Fredericton, New Brunswick, E3B 5H1 and to the recipient at

9. (1) If the recipient, in the opinion of the Minister, fails to proceed diligently with the project, or is otherwise in default under this Agreement, the Minister may exercise any or all of the following remedies:

- (a) terminate the obligation on the part of the Minister to contribute or continue to contribute to the eligible costs of the project,
- (b) if the total amount of the contribution advanced by the Minister at the date of termination exceeds fifty percent (50%) of the total eligible costs incurred, and paid by the recipient at the date of termination (herein referred to as the "excess"), the Minister shall direct the recipient to, and the recipient shall return to the Minister within thirty (30) days of the termination date, the excess,
- (c) the Minister may direct the recipient to, and the recipient shall at no cost to the Province of New Brunswick, transfer and deliver to Her Majesty the Queen in the Right of Canada and New Brunswick jointly, ownership and custody of all intellectual property including the technical data, inventions (whether or not patented), methods and processes obtained pursuant to the performance of this Agreement, and

(d) any other remedy available at law.

9. (2) If at any time the Minister is of the opinion that the project does not warrant further expenditure and should be terminated or if the recipient, upon request, fails to document proposed expenditures in whole or in part, the Minister shall advise the recipient by notice of termination given pursuant to Clause 8, and the recipient shall within thirty (30) days of the registration date of the notice:

(a) deliver to the Minister a detailed statement of eligible costs incurred and paid up to the registration date of the notice supported with proof of payment acceptable to the Minister, and

(b) if the total contribution of the Minister at the registration date of the notice exceeds fifty percent (50%) of total eligible costs incurred and paid at the registration date of the notice, (hereinafter referred to as the "excess"), the recipient shall return to the Minister, the excess.

10. (1) The recipient undertakes that all material published by him pertaining to the results or activities under this Agreement will prominently acknowledge the financial support of the Province of New Brunswick and the Government of Canada.

10. (2) All announcements which may be in reference to this Agreement or to the work described in the attached Schedule "A" shall be authorized in advance of being made public by the Minister; such announcements, including such items as releases to or communications with the press, public speeches, publications of a scientific, technical or financial nature, but not including such items as correspondence of limited distribution, addressed to associated or subcontracting organizations, and necessary for the completion of the work, shall acknowledge prominently the support given to the project through the Canada-New Brunswick Subsidiary Agreement on Mineral Development.

11. (1) The recipient is engaged by the Minister as an independent contractor and any and all servants, agents, workers and employees of the recipient shall not be deemed to be servants, agents, workers or employees of the Minister.

11. (2) The recipient will at all times indemnify and save harmless the Minister from and against all claims, demands, loss, costs, damages, actions, suits and other proceedings by whomsoever made, sustained, brought, or attributable to anything done or omitted by the recipient, its servants, agents, workers, or employees, in carrying out any of the provisions of this Agreement.

12. This Agreement and the Schedules "A", "B" and "C" attached hereto constitute the whole Agreement made between the Parties hereto unless duly modified in writing by the Parties.

13. Time shall be of the essence of this Agreement.

14. This Agreement shall enure to the benefit of and be binding upon the Parties hereto, and their respective successors and assigns.

15. The waiver or acquiescence of the Minister of any default by the recipient under any provision of this Agreement shall not be deemed to be a waiver of any such provision or any subsequent or other default by the recipient hereunder.

16. The recipient shall comply with all applicable Provincial and Federal laws and regulations respecting health, environment, safety and conditions of labour.

[illegible]

MINISTER OF NATURAL RESOURCES
AND ENERGY

RECIPIENT

SCHEDULE "A"

RESPONSIBILITIES

The recipient shall:

1. Conduct/supervise the following work and/or studies, as indicated by the document "MISP-Application for assistance"
2. Submit progress reports on or before _____ and thereafter at such intervals as the Minister may require.
3. Submit a final, completely documented report regarding the results of the project on or before _____
4. Where the cost of goods and services exceed the sum of \$5,000, and where it is practical to do so, invite at least three quotations from suppliers, and where reasonably possible, purchases will be made from suppliers submitting the lowest quote. At all times, preference shall be given to quotations from Canadian suppliers.

TERMS OF PAYMENT

The Minister shall make a total contribution of _____ to the recipient in the following manner:

- (a) an initial thirty percent (30%) of the total execution of this Agreement;
- (b) thirty percent (30%) as an interim payment when the recipient documents that he has expended three (3) times the initial amount since the effective date of the Agreement; and
- (c) a final payment of up to forty percent (40%) upon receipt and approval by the Minister of the final report, and the documentation of the balance of the expenditures incurred by the project.

SCHEDULE "B"

The following will be deemed to be eligible costs for the purposes of this Agreement:

SALARIES AND WAGES:

1. Including employer paid benefit contributions.
2. Segregated administrative labour costs, accounting and legal fees.

EXPENSES:

1. Travel, accommodations, meals.
2. Office maintenance.

CONTRACTED SERVICES:

1. Consultants fees.
2. Laboratory testing charges.

OTHER SERVICES AND SUPPLIES:

1. Laboratory and equipment rental.
2. Raw material and sundry supplies.

SCHEDULE "C"

Report Format For Technical MISP Projects

The final report detailing the work setout in this contract shall be written in accordance with the following format:

Abstract (or Project Summary)

- Shall consist of a brief discussion of what was done and of the results achieved. This discussion shall not exceed one type-written page.

Table of Contents

- Shall be all encompassing and shall index and refer to all sections of the report.

List of Figures

List of Tables

- All figures and tables listed shall be referenced in the text of the report.

Acknowledgements

- Shall at least recognize the contributing agencies of the project.

1.0 Introduction

1.1 Objective:

Shall consist of a short and concise paragraph or statement detailing the objectives of the study as presented in the MISP Application Form.

1.2 Scope:

Shall explain the level of effort and the kind of work undertaken to achieve the set objectives given in 1.1 above.

1.3 Background:

This is a general section, to be used at the writer's discretion. It should include any additional information which would support the argument of the investigation. The writer may retitle and/or add sub-titles to this section as to more effectively present the material.

2.0 Project Methodology

Shall explicitly state and explain the setup and procedures used to implement the work covered by the study. Routine analytical techniques, for example, shall be referenced and shall not be detailed explicitly unless they were developed specifically for the project. Samples of all calculations shall also be included. The writer may at his discretion retitle and/or add sub-titles to this section as to more effectively present the material.

3.0 Results and Discussion

Shall present the results obtained and any analysis performed on these results. Large volumes of data and sample calculations should be placed in the appendices of the report. The discussion shall be directed at addressing the set objectives given in 1.1. Failure to meet any of the objectives must be suitably explained in this section. The writer may at his discretion add sub-titles to the section as to more effectively present the material, but may not alter or change the section title.

4.0 Conclusions and Recommendations

Shall be presented in point form and shall clearly explain the net consequences of the study. The recommendations shall be in line with but not restricted to the expected results and benefits of the study as reflected in the MISP Application Form.

5.0 References

Shall contain all of the material referenced in the text of the report.

Appendices

To be used, as required.

APPENDIX D

Advertisement

MINERAL INVESTMENT STIMULATION PROGRAM (MISP)

Canada
Brunswick
Mineral
Development
Agreement



The MISP provides financial assistance to mining and processing companies and individuals interested in the development of New Brunswick's mineral resources. This program is funded under the Canada-New Brunswick Mineral Development Agreement, a subsidiary agreement under the Economic and Regional Development Agreement.

Eligible MISP projects would include:

1. Investigations of an established mineral deposit to help define or extend the resources and to carry out ore characterization tests and beneficiation studies.
2. Mineral Processing Studies
3. Market Studies
4. Market promotion of specific mineral commodities or products.
5. Studies of a company's production and management systems to identify opportunities to improve productivity.

MISP does not cover mineral exploration which has the objective of discovering mineral deposits.

Any firm or individual holding mineral rights in the Province and/or actively involved in mining related activities in New Brunswick is eligible for assistance from MISP.

For further information:

R.D. Harris, P. Eng.
Natural Resources and Energy
New Brunswick
Minerals and Energy Division
P.O. Box 6000
Fredericton, New Brunswick E3B 5H1
Telephone: (506) 453-2206



Natural Resources and Energy New Brunswick
Ressources Naturelles et Énergie
Nouveau-Brunswick
Hon. Malcolm N. MacLeod
Minister / Ministre

PROGRAMME DE STIMULATION DE L'INVESTISSEMENT DANS LE SECTEUR MIN. AL. (PSISM)

Entente Canada-
Brunswick
sur l'exploitation
minérale

Le PSISM accorde une aide financière aux particuliers et aux entreprises d'exploitation minière et de traitement des minéraux qui s'intéressent au développement des ressources minérales du Nouveau-Brunswick. Ce programme est financé en vertu de l'Entente Canada/Nouveau-Brunswick sur l'exploitation minière, une entente auxiliaire de l'entente cadre sur le développement économique et régional.

Les projets suivants seraient admissibles:

1. Recherches sur des gîtes miniers connus afin de définir ou d'étendre les réserves et de réaliser des essais d'établissement des caractéristiques du minéral et des études sur l'enrichissement de ce dernier.

2. Études sur le traitement des minéraux
3. Études de marché
4. Promotion, sur le marché, de produits minéraux de base précis ou de produits transformés.
5. Études sur les systèmes de production et de gestion d'une entreprise afin de déterminer les possibilités d'amélioration de la productivité.

Le PSISM ne comprend pas l'exploration minière, dont l'objectif est de découvrir des gisements minéraux.

Toute entreprise ou tout particulier qui détient des droits miniers dans la province ou qui participe activement à des activités reliées à l'industrie minière au Nouveau Brunswick est admissible à une aide en vertu du PSISM.

Pour plus ample information, s'adresser à:

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